<u>IN THE UNITED STATES PATENT AND TRADEMARK OFFICE</u>

In re Application of:	)	
	:	Examiner: Unknown
William M. SNELGROVE, ET AL.	)	
	:	Group Art Unit: Unknown
Application No.: Not Yet Assigned)		
	:	
Filed: Concurrently herewith	)	
	:	
For: SYSTEM AND METHOD	)	
FOR CONDUCTING	:	
AN AUCTION OVER A	)	March 16, 2001
COMMUNICATIONS NETWORK		

Commissioner for Patents
Washington, D.C.   20231

<u>**PRELIMINARY AMENDMENT AND INFORMATION DISCLOSURE STATEMENT**</u>

Sir:

Prior to substantive examination, please amend the application as follows:

<u>**IN THE SPECIFICATION:**</u>

Page 1, before line 1, kindly add the following new paragraph:

--This application is a continuation of PCT/CA99/00871 (designating the U.S.), filed September 24, 1999, which claims

benefit of U.S. patent application No. 60/101,857, filed September 25, 1998.--

Kindly replace specification paragraphs **[0022]**, **[0023]**, **[0029]**, **[0035]**, **[0043]**, **[0050]**, and **[0051]** with the following <u>Rewritten Paragraphs</u>. Copies of the <u>Marked-up Paragraphs</u> are attached for the Examiner's convenience.

<u>Rewritten Paragraphs</u>

[0022] The connections between various components of the auction system **1**, as well as between the bidder voice terminals **10** and the auction system, can be physical connections, wireless connections or a combination of both. Likewise, it will be appreciated by a person skilled in the art the elements of the auction system **1**, such as the connecting means **20** and the processing means **30**, can each comprise sub-elements distributed at various physical locations. Furthermore, they may be mainly software structures attached to existing hardware platforms available in existing communications networks, specially designed hardware platforms, or a combination of both, such as interface access cards. Moreover, the auctioneer=s tasks may be performed by a person or by a data processor that may act on location or

remotely, in analyzing the information on the output means **40** and commanding the auctioneer voice transmitter **50** to send voice messages to bidder terminals **10**. Therefore, the communication links and the blocks shown in the block diagram of **Figure 1** should not be considered restrictive in a physical sense.

[0023]   In operation, a bidder participating in an auction conducted using the auction system **1** of **Figure 1**, enters bidder messages through a bidder voice terminal **10**. The bidder messages are transmitted to the processing means **30** through connecting means **20**. The bidder messages are processed into bidder data signals to be outputted at the output means **40** in order of arrival. The processed bidder data signals comprise information on the bidder message content as well as a bidder identifier. Therefore, through the output means **40**, the auctioneer acknowledges the content of bidder messages and the identity of bidders that originate the messages, in an orderly fashion. This allows the auctioneer to identify the bidders, reducing ambiguity when more bids are received within a small time interval from various locations.

[0029]   A bidder message entering the processing means

30 is routed to the recognizing means 35, where its content is

recognized. The recognizing means 35 selects the auction relevant

messages from other bidder messages that a bidder may input through

a bidder voice terminal 10. The auction relevant messages can be,

for example, bids or access messages.

[0035]   The access control block 37 may perform one or

more of several functions. The access control block 37 may verify

an access message such as a password or a credit card number, for

example by accessing special databases such as a credit database

90. Also, in order to determine the access rights of a bidder to

the auction, the access   control block 37 may generate access

information requests as data signals 22 that are coded into voice

messages by a voice coder block 36 and sent, through the connecting

means 20, to targeted bidder voice terminal 10. Furthermore, upon

determining whether a certain bidder may or may not participate in

the auction, the access control block 37 may send control signals

to the connecting means 20, instructing the connecting means 20 to

allow or to restrict the communication of said bidder with the

auction system 1. In this way, the access control block 37 updates

the record of bidders participating in the auction, which is maintained by the connecting means **20** as previously described.

[0043]   The embodiment of the invention presented in **Figures 1** and **2** addresses the problems noted in the Background section, as follows. The auction system in **Figures 1** and **2** allows real-time communication among bidders and auctioneer, without requiring bidders to be physically present at an auction place, or to appoint a representative at an auction place. Through this system, bidders may communicate bidirectionally with the auctioneer by means of voice terminals. By allowing the auction to be conveyed by voice at least on the bidders side, the system described above is closer to recreating the atmosphere of physical auctions and thus can be found more entertaining or easier to use by potential bidders, leading to a potentially more competitive bidding process. Furthermore, voice terminals can be incorporated within personal computers or they can function as independent pieces of equipment. In the latter case, they can be more accessible in terms of cost of use. Furthermore, current voice terminals are usually wider spread and better connected to existing communication networks, than Internet connected computers used in prior-art systems. Even further, wireless voice terminals are smaller and lighter, thus easier to carry than personal computers.

[0050]   The data packets are presented according to a predetermined scheme.   According to this embodiment, the auctioneer=s computer **45** uses estimates of the different time delays for different bidders through networks **2** and **3** to compensate for the bias in favor of Acloser@ users, and uses these estimates in the predetermined scheme, in order to output data packets according to the time when the associated bidder messages were actually entered.   In this embodiment, the auctioneer computer **45** accomplishes the time compensation routine by subtracting the round-trip delay through networks **2** and **3** of each data packet it receives, from the time at which same data packet is received, before deciding which data packet came first.   The same method may be used to alert the auctioneer that a bidder had entered a bid before being able to hear the closing gavel, and the bid should therefore be allowed.   The round-trip time estimates needed for this embodiment are obtained from the controlling software for the networks **2** and **3**. Alternatively, the round-trip estimates could be obtained from the delay in receiving an echo from a bidder telephone set **10** using a system identification algorithm based on an echo cancellation technique known in the art.

[0051]   In accordance with the embodiment in **Figure 3**, the auctioneer computer **45** may command the bid interpreters **14** to act as part of a voice conferencing system by sending data packets through connections **24** to the bid interpreters **14**. With the voice conferencing system thus enabled, bidders participating in the auction can hear the voices of active bidders in addition to the voice of the auctioneer. Active bidders are herein defined as bidders participating in the auction and entering bidder messages representing valid bids through their telephone sets **10**. Inactive bidders are bidders participating in the auction that remain silent on the line; bidders involved in a different auction process than a bidding process, such as in the process of obtaining authorization; or bidders who make comments that do not pertain to the auction. The distinction among active and inactive bidders is made at the level of bid interpreters **14**, which use voice recognition or other suitable decoding algorithms, to recognize the content of the messages received from bidders.

IN THE CLAIMS:

Please cancel Claims 1-23, without prejudice or disclaimer of the subject matter claimed therein.

Please add new Claims 24-49 ,as follows:

24. An auction system for use over a communication network, comprising:

an auctioneer voice transmitter for entering auctioneer voice messages from an auctioneer;

a plurality of bidder voice terminals each for entering voice bidder messages from a bidder respective thereto, each of said bidder voice terminals also for presenting voice bidder messages from other bidders and said auctioneer voice messages;

a connecting means interconnecting said transmitter and said terminals;

a processing means attached to said connecting means for converting said auctioneer voice messages and said voice bidder messages into a bidder data signal; and

an output means connected to said processing means for presenting said bidder data signals to said auctioneer.

25. The auction system according to claim 24, wherein said processing means further comprises a message selector for determining whether said voice bidder messages are active bidder messages or inactive bidder messages such that only said active bidder messages are presented at said output device.

26. The auction system according to claim 25, wherein said bidder voice terminals are attached, via said connection

means, to said message selector such that only said active bidder messages are presented at said bidder voice terminals.

27. The auction system according to claim 26, wherein said inactive bidder messages are returned to an originating bidder voice terminal each accompanied by a message that said each bidder message was determined to be inactive.

28. The auction system according to claim 25, wherein said inactive bidder messages are returned to an originating bidder voice terminal each accompanied by a message that said each bidder message was determined to be inactive.

29. The auction system according to claim 24, further including a time compensation means, attached to said connection means, for determining propagation delays of signals within said network and utilizing said propagation delays for ordering said bidder messages at said output means according to a real-time order in to which of said bidder messages was placed.

30. The auction system according to claim 29, wherein said time compensation means further utilizes said propagation delays for alerting said auctioneer that one or more of said

bidders entered one of said bidder messages before hearing that bidding was closed.

31. The auction system according to claim 30, wherein said propagation delay estimates are obtained by estimating the delay before receiving an echo from each bidder voice terminal.

32. The auction system according to claim 29, wherein said propagation delay estimates are obtained by estimating the delay before receiving an echo from each bidder voice terminal.

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33. The auction system according to claim 24, further comprising a means for reducing background noise.

34. An auction system for use over a communication network, comprising:

an auctioneer voice transmitter for entering auctioneer voice messages from an auctioneer;

a plurality of bidder voice terminals each for entering voice bidder messages from a bidder respective thereto, each of said bidder voice terminals also for presenting voice bidder messages from other bidders and said auctioneer voice messages;

a connecting means interconnecting said transmitter and said terminals;

a processing means attached to said connecting means for converting said voice bidder messages into a bidder data signal, said processing means including a message selector for determining whether said voice bidder messages are active bidder messages or inactive bidder messages;

a time compensation means attached to said connecting means for determining propagation delays of signals within said network and utilizing said propagation delays for ordering said active bidder messages according to a real-time order in which said bidder messages were entered; and

an output means connected to said processing means and said time compensation means for presenting, in order, said active bidder data signals to said auctioneer.

35. The auction system according to claim 34, wherein said bidder voice terminals are attached, via said connection means, to said message selector such that only said active bidder messages are presented at said bidder voice terminals.

36.   The auction system according to claim 34, wherein said time compensation means further utilizes said propagation delays for alerting said auctioneer that one or more of said bidders entered one of said bidder messages before hearing that bidding was closed.

37.   The auction system according to claim 36, wherein said propagation delay estimates are obtained by estimating the delay before receiving an echo from each bidder voice terminal.

38.   The auction system according to claim 35, wherein said propagation delay estimates are obtained by estimating the delay before receiving an echo from each bidder voice terminal.

39.   The auction system according to claim 34, further comprising a means for reducing background noise.

40.   The auction system according to claim 34, wherein said inactive bidder messages are returned to an originating bidder voice terminal accompanied by a message that said bidder message was determined to be inactive.

41. A processing means for use in an auction system for use over a communication network, said auction system having an auctioneer voice transmitter for entering auctioneer voice messages from an auctioneer; a plurality of bidder voice terminals each for entering voice bidder messages from a bidder respective thereto, each of said bidder voice terminals also for presenting voice bidder messages from other bidders and said auctioneer voice messages; a connecting means interconnecting said transmitter and said terminals, said processing means comprising:

recognizing meansfor converting said and voice bidder messages into a bidder data signal; and

a message selector for determining whether said voice bidder messages are active bidder messages or inactive bidder messages such that only said active bidder messages are presented at an output means.

42. The processing means according to claim 41, wherein said bidder voice terminals are attached to said message selector such that only said active bidder messages are presented at said bidder voice terminals.

43. The processing means according to claim 42, wherein said inactive bidder messages are returned to an originating bidder voice terminal accompanied by a message that said bidder message was determined to be inactive.

44. A method of conducting an auction over a network comprising the steps of:

receiving, from an auctioneer, an auctioneer voice message at an auctioneer voice terminal connected to said network;

presenting said auctioneer voice message at a plurality of bidder voice terminal connected to said network;

receiving a voice bidder message from a bidder, said bidder voice message being responsive to said auctioneer voice message, said voice bidder message received at one of said bidder voice terminals respective to said bidder;

presenting said received voice bidder message at a remainder of said bidder voice terminals;

converting said voice bidder message into a bidder data signal;

presenting said bidder data signal to said auctioneer at an output means; and

repeating the foregoing steps until said auctioneer closes bidding.

45. The method according to claim 44, further comprising the step of determining whether said voice bidder message is active or inactive and only presenting said bidder data signal at said output means if said voice bidder message was active.

46. The method according to claim 45, further comprising the step of only presenting said voice bidder message at said remainder of said bidder voice terminals if said voice bidder message was active.

47. The method according to claim 19 further comprising the step of returning said voice bidder message to an originating bidder voice terminal if said voice bidder message was inactive.

48. The method according to claim 47, further comprising the step of sending a notification to said originating bidder voice terminal that said voice bidder message was inactive.

49. The method according to claim 44 further comprising the steps of:

receiving at least one additional bidder voice message;

determining propagation delays of signals within said network; and

utilizing said propagation delays for presenting said bidder messages at said output means according to a real-time order in which of said bidder messages was placed.

REMARKS

Consideration and allowance of the subject application are respectfully requested.

Claims 24-49 are pending in the application. Claims 24, 34, 41, and 44 are independent.

In view of the above amendments and remarks, it is believed that this application is now in condition for allowance and a Notice thereof is respectfully requested.

INFORMATION DISCLOSURE STATEMENT

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO-1449. Copies of the listed documents are also enclosed.

CONCLUSION

It is respectfully requested that the below-listed information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be returned indicating that such information has been considered.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

_____
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Marked-up Paragraphs

[0022]   The connections between various components of the auction system **1**, as well as between the bidder voice terminals **10** and the auction system, can be physical connections, wireless connections or a combination of both. Likewise, it will be appreciated by a person skilled in the [that] <u>art</u> the elements of the auction system **1**, such as the connecting means **20** and the processing means **30**, can each comprise sub-elements distributed at various physical locations. Furthermore, they may be mainly software structures attached to existing hardware platforms available in existing communications networks, specially designed hardware platforms, or a combination of both, such as interface access cards. Moreover, the auctioneer's tasks may be performed by a person or by a data processor that may act on location or remotely, in analyzing the information on the output means **40** and commanding the auctioneer voice transmitter **50** to send voice messages to bidder terminals **10**. Therefore, the communication links and the blocks shown in the block diagram of **Figure 1** should not be considered restrictive in a physical sense.

[0023]   In operation, a bidder participating in an auction conducted using the auction system **1** of **Figure 1**, enters

bidder messages through a bidder voice terminal **10**. The bidder

messages are transmitted to the processing means **30** through

connecting means **20**. The bidder messages are processed into bidder

data signals to be outputted at the output means **40** in order of

arrival. The processed bidder data signals comprise information on

the bidder message content as well as a bidder identifier.

Therefore, through the output means **40**, the auctioneer acknowledges

the content of bidder messages and the identity of bidders that

originate the messages, in an orderly fashion. This allows the

auctioneer to identify the bidders, reducing ambiguity when more

bids are received within a small time interval from various

locations.

[0029]   A bidder message entering the processing means

30 is routed to the recognizing means **35**, where its content is

recognized. The recognizing means **35** selects the auction relevant

messages from other bidder messages that a bidder may input through

a bidder voice terminal **10**. The auction relevant messages can be,

for example, bids or access messages.

[0035]   The access control block **37** may perform one or

more of several functions. The access control block **37** may verify

an access message such as a password or a credit card number, for example by accessing special databases such as a credit database 90. Also, in order to determine the access rights of a bidder to the auction, the access control block 37 may generate access information requests as data signals 22 that are coded into voice messages by a voice coder block 36 and sent, through the connecting means 20, to targeted bidder voice terminal 10. Furthermore, upon determining whether a certain bidder may or may not participate in the auction, the access control block 37 may send control signals [24] to the connecting means 20, instructing the connecting means 20 to allow or to restrict the communication of said bidder with the auction system 1. In this way, the access control block 37 updates the record of bidders participating in the auction, which is maintained by the connecting means 20 as previously described.

[0043]   The embodiment of the invention presented in **Figures 1** and **2** addresses the problems noted in the Background section, as follows. The auction system in **Figures 1** and **2** allows real-time communication among bidders and auctioneer, without requiring bidders to be physically present at an auction place, or to appoint a representative at an auction place. Through this system, bidders may communicate bidirectionally with the auctioneer

by means of voice terminals. By allowing the auction to be conveyed by voice at least on the bidders side, the system described above is closer to recreating the atmosphere of physical auctions and thus can be found more entertaining or easier to use by potential bidders, leading to a potentially more competitive bidding process. Furthermore, voice terminals can be incorporated within personal computers or they can function as independent pieces of equipment. In the latter case, they can be more accessible in terms of cost of use. Furthermore, current voice terminals are usually wider spread and better connected to existing communication networks, than Internet connected computers used in prior-art systems. Even further, wireless voice terminals are smaller and lighter, thus easier to carry than personal computers.

[0050]   The data packets are presented according to a predetermined scheme. According to this embodiment, the auctioneer=s computer **45** uses estimates of the different time delays for different bidders through networks **2** and **3** to compensate for the bias in favor of Acloser@ users, and uses these estimates in the predetermined scheme, in order to output data packets according to the time when the associated bidder messages were actually entered. In this embodiment, the auctioneer computer **45** accomplishes the time compensation routine by subtracting the

round-trip delay through networks **2** and **3** of each data packet it receives, from the time at which same data packet is received, before deciding which data packet came first. The same method may be used to alert the auctioneer that a bidder had entered a bid before being able to hear the closing gavel, and the bid should therefore be allowed. The round-trip time estimates needed for this embodiment are obtained from the controlling software for the networks **2** and **3**. Alternatively, the round-trip estimates could be obtained from the delay in receiving an echo from a bidder telephone set **10** using a system identification algorithm based on [the] <u>an</u> echo cancellation technique known in the art.

[0051]   In accordance with the embodiment in **Figure 3**, the auctioneer computer **45** may command the bid interpreters **14** to act as part of a voice conferencing system by sending data packets through connections **24** to the bid interpreters **14**. With the voice conferencing system thus enabled, bidders participating in the auction can hear the voices of active bidders in addition to the voice of the auctioneer. Active bidders are herein defined as bidders participating in the auction and entering bidder messages representing valid bids through their telephone sets **10**. Inactive bidders are bidders participating in the auction that remain silent

on the line; bidders involved in a different auction process than a bidding process, such as in the process of obtaining authorization; or bidders who make comments that do not pertain to the auction. The distinction among active and inactive bidders is made at the level of bid interpreters **14**, which use voice recognition or other suitable decoding algorithms, to recognize the content of the messages received from bidders.